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Traffic Control:

How the money's being spent

American City & County

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Local government receipts jump 10.6% for the year.

On the cover: A workman gives a downtown streetlight some needed maintenance in this photo provided by the Lift-A-Loft Corporation of Muncie, Indiana.

How cities are spending traffic dollars

Cover
Story

Although traffic dollars may be scarce at the local level, public safety, energy conservation and pollution abatement are still able to help traffic engineers spring funds loose.

Where are the big bucks being spent for traffic control? Right where you would expect — in communities of 250,000 population or more. And what is the money being spent on? Surprise . . . it's not for the top priority function of traffic engineers in those cities, striping and roadway marking. Instead, the largest portion of the budget (47.6%) is earmarked for computerized traffic system projects, an indication of how federal grant assistance is able to bend local priorities.

But cheer up . . . it's all for a good cause. Over three-quarters of the respondents to ACC's 1981 Traffic Expenditure Survey said that "improved public safety" was their goal.

ACC's 1981 traffic survey was conducted last July when questionnaires were mailed to nearly 1,500 traffic engineers and officials in communities with populations of 2,500 or greater in all 50 states. By the mid-August tabulation date some 167 separate jurisdictions had reported back. And what we heard was not all that surprising if one had been reading the papers over the last year.

"Nothing budgeted for this year or next," reported the small community of Lehi, Utah. "No money budgeted for any new improvements; maintenance only," said Montclair, California. And the Di-

rector of Public Works for Okanogan County, Washington, Alan King, wrote ACC that "... with the current extremely tight finances, directional signing may be eliminated . . ." from the \$75,000 traffic budget for his county of 30,000 people and 1,800 miles of roadway.

Not all was cut, cut, cut, however. Milan, Ohio, reported spending \$4000 to update all of its directional signs, intersection signs and other traffic control signs to conform to DOT standards. Nashville, Michigan, had just completed a similar \$12,000 re-signing project. And Alexandria, Louisiana, told ACC that it was currently involved in a federally funded project (expected cost \$2.0 million) to upgrade its signal system.

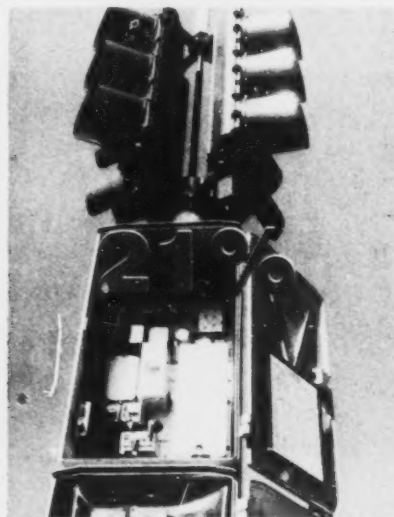
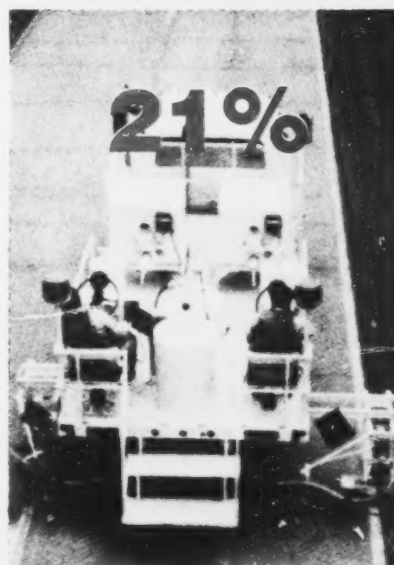
Were these cities exceptions to the rule? As our survey found, they're not; most department budgets are healthy.

How population affects \$

There are some 5584 cities in the U.S. with populations larger than 2,500. Of these, 58 (10%) are greater than 250,000 in size, 105 (1.9%) between 100,000 and 250,000, 230 (4.1%) between 50,000 and 100,000, 514 (9.2%) between 25,000 and 50,000, and 4677 (83.8%) less than 25,000 in population. Some 167 of those communities responded to the ACC Traffic Expenditure Survey, and of that number, about 154 provided data useable in the statistical analysis.

Cities with populations greater than 250,000 reported spending some 56.2 percent of the total U.S. expenditures for traffic control uncovered by the survey.

Most of their dollars — some 47.6 per-



Traffic Control Expenditures by Region

Region	Northeast	South	North Central	West	National Average
How the money is spent, %					
Striping and Road Marking	44.4	11.5	17.2	18.2	21.5
Signs	1.2	19.4	11.1	8.1	10.7
Signal Heads, Traffic Detectors, and Controllers	17.2	21.8	16.5	34.9	20.9
Traffic System Computers	32.2	24.6	51.3	16.5	35.2
Streetlights and Controls	5.0	22.7	3.9	22.3	11.7
What the top priorities are, %					
Striping and Road Marking	45.2	36.4	28.0	33.3	34.7
Signs	29.0	24.2	44.0	27.8	32.7
Signal Heads, Traffic Detectors, and Controllers	12.9	27.2	12.0	25.0	18.6
Traffic System Computers	—	6.1	4.0	5.6	4.0
Streetlights and Controls	12.9	6.1	12.0	8.3	10.0
Who's spending how much, %					
Regional Share of U.S. Total	20.6	25.1	38.6	15.7	—

cent, as a matter of fact — went for computerized traffic system projects. Almost every city of this size which responded to our survey reported a major on-going project of this type. However, as with communities of smaller size, the top priority for traffic departments in these megalopolitan areas proved to be the more mundane striping and road marking functions, according to nearly 43 percent of their traffic officials.

"Improved public safety" seemed to be the magic phrase used to escape the budget axe, although perhaps as a sign of the tight-budget times these large urban areas are going through, 11.1 percent of the respondents were able to lean on "maintenance" to help justify their top priority expenditures.

These larger communities also allocated the lowest amount of their traffic department budgets for streetlighting systems — barely 0.3 percent. In most cases,

it was pointed out by respondents that their streetlighting function had been transferred to a separate department.

Forty percent of the responding traffic engineers in cities with populations of **100,000 to 250,000** said their Number One priority was road marking, yet again the greatest share of their budgets — 30.2 percent — went for traffic system computers. Only 10 percent cited computer projects as their top priority.

Communities in this size range reported spending only 9.4 percent of the total traffic dollars. The money went for striping (26%), signing (15.7%), signalization (12.3%), and streetlights (15.8%), in addition to that spent on traffic system computerization.

These cities reported the lowest reliance on "improved public safety" as a budget justification, with only 66.7 percent of the respondents citing that rational, while 22.2 percent said energy

conservation sold their projects and 11.1 percent hung their hats on pollution abatement.

Among cities of from **50,000 to 100,000** population, computerized traffic system projects received the lion's share of the budget — some 35.1 percent. However, the top priority for these communities proved to be general signalization followed by signing projects and roadway marking. Signalization — expenditures for vehicular signal heads, pedestrian signal heads, traffic detectors, and signal controllers — accounted for 28.2 percent of the dollars spent by these communities. The third most significant expense for these departments (which spend 15.7 percent of all traffic dollars in the U.S.) was for streetlighting (22.3%).

When it came to justifying traffic expenditures, communities in this "transition" population range fell right in line with their larger and smaller contemporaries. Some 73.3 percent of the respondents said that their top priority projects were necessary to improve public safety and the remainder cited "increased energy conservation" as justification.

Cities in the **25,000 to 50,000** population range reported putting their emphasis on striping and road marking when it came to priorities, but apparently were forced to spend an inordinate amount of their budget — almost 40 percent — on streetlighting. The second largest budget item among these communities was for signalization (33.8%) and next in line came traffic system computers (11.3%). Striping — their Number One priority function — accounted for only 8.2 percent of the traffic budget for these cities. Signing and streetlighting shared honors for the second highest priority traffic control function.

These communities reported spending 11.6 percent of the U.S. traffic budget. And, as with their contemporaries, 75 percent of the respondents in this category said public safety was their goal.

In communities of **less than 25,000** people but greater than 2,500 streetlighting again captured the dominant share of the traffic department budget (31.8%), yet as was seen throughout the study, traffic engineer priorities and budget expenditures did not coincide. Street and directional signing showed up as the top priority with 40 percent of the responding traffic officials from these smaller communities. Striping and road marking, however, was not far down the list with 34.3 percent citing that function as their top priority.

Only 1.5 percent of the aggregate traffic budget for jurisdictions of this size was allocated for traffic system computerization, and here priorities and expenditures fell right in line with only 1.4 percent of the responding officials calling such a system their top priority. These communities — the smallest in popula-

tion ACC surveyed — reported spending only 7.1 percent of the total U.S. traffic dollars. Yet, traffic engineers and officials in these cities were right in step with their larger community contemporaries; nearly 84 percent of them cited “improved public safety” as their goal.

The regional picture

Geographically, 30 percent of the respondents to the ACC survey were located in the 12 North Central states, 26 percent in the 13 Western states (including Alaska and Hawaii), 24 percent in the 16 Southern states, and 20 percent in the nine Northeastern states. In the West, 77 percent of the returns were from the heavily populated coastal states of California, Oregon and Washington. In the North Central, the Great Lakes states dominated the returns and in the Northeast, communities in the four states contiguous to the New York City metropolitan area were heavily represented. In the South, Texas and Louisiana anchored the western part of the region, while Maryland, Virginia and North Carolina nailed down the eastern sector. Ten states — Wyoming, Montana, Arizona, New Mexico, Kansas, Kentucky, Georgia, Maine, New Hampshire and Vermont — failed to respond to the survey in time for their data to be tabulated.

In the **South**, Number One priority among traffic engineers was striping and roadway marking. This year they'll spend 11.5 percent of their department budgets in that area. However, computerized traffic systems will take up 24.6 percent of their budgets as well.

Traffic departments in the South spend about 25 percent of all of the dollars spent in the U.S. on traffic control. Although cities in this region gave top priority to striping and road marking projects, investments in signs and signal systems were close seconds when it came to setting priorities.

Traffic engineers in this region, as in every other region surveyed, cited “improved public safety” as the budget justification they used to blunt the auditor's axe. Some 74.3 percent of the respondents said their top priority projects were supported in that manner. Another 17 percent said that energy conservation got their projects through.

In the **North Central** states, where 38.6 percent of the total U.S. traffic expenditures reported were found, 51.3 percent of those dollars were spent on computerized traffic control systems. Nevertheless, traffic engineers in this region cited signing projects as their top priority. In fact, only four percent of the respondents from this area indicated that traffic system computers were their Number One priority, an anomaly that might be explained by the high cost of such systems in the highly urbanized communities found throughout this region.

Improved public safety was used by

77.3 percent of the North Central respondents to justify traffic control expenditures, while 18.2 percent cited energy conservation and another 4.5 percent used pollution abatement to get their budgets through.

The **Northeast** proved to be the only region surveyed which matched its budget to its priorities. Roadway striping was cited as the top priority for traffic expenditures by 45.2 percent of the traffic departments in area, and they followed that by allocating 44.4 percent of their budgets to that function. However, the second most important function cited by communities in these nine states, signing projects, was allotted only 1.2 percent of the pie. Computerized traffic systems received a 32 percent share of the budget.

This region, which reported spending 20.6 percent of the traffic dollars in the U.S., spent the money to improve public safety, according to 90.5 percent of the

respondents. Reliance on the “public safety” rationale proved to be most prevalent in the Northeast by a significant margin.

Thirteen western states reported that while they would spend 34.9 percent of their funds on traffic signals, traffic detectors, and signal controllers, the top priority for 33.3 percent of the departments in the **West** was striping and marking. However, striping, signing, and traffic signals and accessories shared top-priority honors in this region, getting the votes of 33.3 percent, 27.8 percent and 25 percent of the respondents, respectively.

Nearly 75 percent of the traffic engineers from these states used “improved public safety” as their budgetary rationale, while 15.2 percent reported that energy conservation sold their priority projects.

Traffic departments in the West reported spending about 16 percent of the traffic control dollars in the U.S. **ACC**

Traffic Control Expenditures by City Size

Population	Less than 25,000	25,000-50,000	50,000-100,000	100,000-250,000	More than 250,000	National Average
How the money is spent, %						
Striping and Road Marking	26.3	8.2	9.6	26.0	28.1	21.5
Signs	21.4	7.6	4.8	15.7	8.4	10.7
Signal Heads, Traffic Detectors, and Controllers	19.0	33.8	28.2	12.3	15.6	20.9
Traffic System Computers	1.5	11.3	35.1	30.2	47.6	35.2
Streetlights and Controls	31.8	39.1	22.3	15.8	0.3	11.7

What the top priorities are, %

Striping and Road Marking	34.3	34.5	23.8	40.0	42.9	34.7
Signs	40.0	20.7	28.6	20.0	28.5	32.7
Signal Heads, Traffic Detectors, and Controllers	15.7	10.3	33.3	30.0	14.3	18.6
Traffic System Computers	1.4	13.8	4.8	10.0	14.3	4.0
Streetlights and Controls	8.6	20.7	9.5	—	—	10.0

Who's spending how much, %

Share of U.S. Total	7.1	11.6	15.7	9.4	56.2	—
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Municipal Cost Indexes

Cost Index Figures of the Month, showing 30-day¹, 12-month changes (1967 = 100)

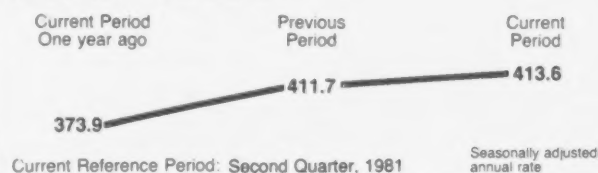
ACC MUNICIPAL COST INDEX

297.2 +0.6% +10.4%

Consumer Price Index	276.5	0.8%	10.9%
ACC Construction Cost Index	323.0	0.4	7.8
General Construction Materials	303.4	0.1	8.3
Motorized Equipment	275.8	0.2	12.7
Energy; Fuels and Power	870.4	0.7	25.1
Consumable Supplies	289.1	0.9	12.1
Producer Price Index	271.2	0	7.9

MUNICIPAL TREND TO WATCH

Receipts, Billions of Dollars



CAPITAL EQUIPMENT

265.9 +0.1% +9.9%

Agricultural Machinery & Equip.	289.3	0.7%	11.3%
Air Conditioners (12/77 = 100)	130.4	0	5.4
Construction Machinery & Equip.	324.9	0.3	10.7
Electric Motors	279.0	1.6	9.5
Environmental Controls (6/80-100)	109.7	3.8	9.5
Fans and Blowers (Ex. Portable)	325.3	0.1	9.1
Fluid Power Equipment	223.6	0 ^a	11.1
Generators and Generator Sets	336.2	2.3 ^a	15.3
Heating Equipment	227.2	0.7 ^a	9.2
Industrial Material Handling Equip	280.7	0.6 ^a	9.9
Integrating & Measuring Inst.	202.4	0.7	8.5

Internal Combustion Engines	305.2	1.1%	12.4%
Motor Trucks, Light	244.0	(2.4)	10.3
Motor Trucks, Heavy	283.6	0	9.6
Office Machines	148.9	0.3 ^a	5.1
Passenger Cars	205.3	(0.2)	7.2
Photographic Equipment	127.6	(0.4)	2.3
Pumps, Compressors & Equipment	328.6	0.7	13.0
Railroad Equipment	345.0	0.2 ^a	8.5
Refrig. Compressors (12/77 = 100)	128.1	0 ^a	4.4
Switchgear, Switchboard Equip.	247.9	0.4	7.4

INDUSTRIAL COMMODITIES

314.3 +0.5% +10.0%

Abrasive Products	277.6	0% ^a	8.2
Apparel	186.5	0.2	6.5
Asphalt Roofing	419.2	(0.3)	1.9
Building Paper and Board	233.8	(0.3)	11.2
Coal	507.3	0.3	8.2
Commercial Furniture	259.2	0 ^a	9.2
Concrete Products	293.0	0	6.2
Diesel Fuel (2/72 = 100)	849.3	(0.6) ^a	20.2
Drugs and Pharmaceuticals	227.1	0 ^a	8.8
Electric Lamps/Bulbs	273.5	1.8 ^a	4.5
Electric Power	383.6	2.3	15.0
Electronic Components	170.0	0.3	6.2
Fabricated Structural Metal	300.0	0.6	9.9
Finished Lubricants	347.3	0.6 ^a	8.8
Finished Steel Products	343.3	0	14.6
Flat Glass	218.8	1.2 ^a	9.7
Floor Coverings	182.3	(0.3)	11.3
Footwear	242.3	0.2	3.7
Footwear, Rubber	220.5	0.2	1.8
Foundry Products	331.8	0.2	6.3
Fuel Oil, No. 2 (2/73 = 100)	874.4	(0.7)	24.2
Gasoline	726.6	(0.9)	11.7
Glass Containers	334.8	0	13.8
Gypsum Products	255.3	(1.7)	1.4
Hand Tools, Power (12/76 = 100)	140.0	0.4 ^a	8.4
Hardware	263.2	0.6 ^a	8.2
Industrial Chemicals	371.9	0.4 ^a	12.7
Kerosene (2/73 = 100)	836.1	(1.0)	22.6
Lumber, Hardwood	257.3	0.1	3.8

Lumber, Softwood	347.7	(0.4)%	(2.6)%
Millwork	272.4	(0.4)	4.6
Mixed Fertilizers	264.5	(0.4)	9.0
Motor Vehicle Parts	323.9	2.2	26.3
Natural Gas	1125.1	1.0 ^a	29.5
Nonferrous Wire and Cable	207.0	0	(3.9)
Paint Materials	308.4	1.3	10.8
Paper	283.8	1.4	9.7
Paperboard	261.2	(0.1)	9.6
Pesticides	446.7	0.4 ^a	18.8
Photographic Supplies	267.1	(2.8)	3.7
Plastic Constr. Prod. (12/69 = 100)	157.6	1.3	(1.1)
Plastic Film (12/70 = 100)	205.5	0	4.7
Plumbing Fixtures & Brass Fittings	271.0	0.3	8.2
Plywood	245.9	(0.9)	(7.6)
Portland Cement	329.4	0	5.2
Prepared Paint	251.0	0 ^a	5.1
Refractories	308.0	0	13.8
Residual Fuel	1246.4	1.0	30.7
Sand, Gravel & Crushed Stone	265.3	0.2	8.8
Sanitary Papers & Health Prod.	349.2	0	4.5
Soaps & Synthetic Detergents	239.7	0.2 ^a	8.0
Sporting Goods	214.0	0.1	6.3
Structural Clay Products	250.4	0 ^a	9.0
Tires and Tubes	251.0	0	5.5
Tractor Parts	212.3	0.1 ^a	17.2
Transformers & Power Regulators	213.6	0.9 ^a	13.1
Valves & Fittings	312.0	0.5	6.8
Wiring Devices	303.5	0.7	12.4

1) Thirty-day figures seasonally adjusted, except where noted 2) Not seasonally adjusted